

fact differ from those above; and although the Polythalamia are still abundant, and many of the species appear to be the same as in the strata above, yet they are less easy to observe on account of the greater compactness of the marls, and the adherence of crystalline calcareous particles to the shells.

“6. The marls which you sent from the Cooper River, 35 to 38 miles above Charleston, also abound in Polythalamia, and so many of the species are identical with those found beneath Charleston, that they most probably belong to the same formation. This place on the Cooper River may be the outcrop of the very slightly inclined beds which exist under Charleston. [In this conclusion Prof. Bailey is correct.—J. L. S.]

“7. The Polythalamia, to whose labours South Carolina owes so large a portion of her territory, are still at work in countless thousands upon her coasts, filling up harbours, forming shoals, and depositing their shells to record the present state of the sea-shore, as their predecessors, now entombed beneath Charleston, have done with regard to ancient oceans. The mud from Charleston harbour is filled not only with beautiful Polythalamian shells, but is also very rich in siliceous infusoria.”—*Extract of a letter from Prof. Bailey to J. L. Smith, in Silliman's American Journal, Jan. 1845.*

METEOROLOGICAL OBSERVATIONS FOR JAN. 1845.

*Chiswick.*—January 1. Foggy. 2. Cloudy: frosty. 3. Frosty: cloudy. 4. Overcast. 5. Rain. 6. Very fine. 7. Thick haze: very fine. 8, 9. Foggy. 10. Thick haze: boisterous at night. 11. Boisterous, with rain. 12. Hazy: rain: fine. 13. Overcast: clear. 14. Rain: drizzly: heavy rain. 15. Rain: fine. 16, 17. Overcast. 18. Densely clouded: heavy rain. 19. Clear: hail-shower at noon: constant heavy rain at night. 20. Boisterous. 21. Clear and frosty. 22. Sharp frost: hazy: fine: overcast. 23. Overcast: rain. 24. Fine: rain: frosty. 25. Clear and frosty: overcast: boisterous. 26. Boisterous: clear. 27. Rain: boisterous: cloudy. 28. Slight snow: fine, with sun: rain. 29. Overcast. 30. Hazy: frosty. 31. Frosty: cloudy: frosty.—Mean temperature of the month 20°·36 above the average.

*Boston.*—Jan. 1. Foggy. 2. Snow. 3, 4. Fine. 5. Cloudy: rain early A.M. 6—10. Cloudy. 11. Windy: rain early A.M.: rain P.M. 12. Foggy. 13. Foggy: rain A.M. 14. Cloudy. 15. Cloudy: rain early A.M. 16. Cloudy. 17. Fine. 18. Cloudy: rain P.M. 19. Cloudy. 20. Stormy: rain early A.M. 21. Fine. 22. Rain. 23. Cloudy. 24, 25. Fine. 26. Stormy. 27. Snow: rain A.M. 28. Fine: rain A.M. 29. Cloudy. 30, 31. Fine.

*Sandwich Manse, Orkney.*—Jan. 1. Bright: cloudy. 2. Clear: frost: cloudy. 3. Clear: frost: showers. 4. Showers: rain. 5. Showers: cloudy. 6. Showers: clear. 7. Bright: clear: aurora. 8. Clear: frost: clear. 9. Clear: cloudy. 10. Cloudy. 11, 12. Bright: clear. 13. Cloudy: drops. 14. Cloudy. 15. Bright: clear. 16. Clear: cloudy. 17. Showers. 18. Bright: cloudy. 19. Bright: frost: clear: frost. 20. Bright: frost: clear: aurora. 21. Cloudy: frost: drops. 22. Bright: showers: halo. 23. Showers. 24. Showers: clear. 25. Rain. 26. Showers: hail-showers. 27. Cloudy. 28. Snow-showers: clear: aurora. 29. Snow-showers: drift. 30. Clear. 31. Showers.

*Applegarth Manse, Dumfries-shire.*—Jan. 1. Frost: dull. 2. Slight frost. 3. Thaw: frost A.M. 4. Frost A.M.: rain P.M. 5. Rain A.M. 6. Dry and mild. 7. Rain early A.M. 8. Fair, but dull. 9. Fair: slight frost. 10. Fair, but dull: rain P.M. 11. Heavy rain A.M.: flood. 12. Fair and mild. 13. Rain: frost. 14. Fair. 15. Dull and cloudy. 16. Frost. 17. Slight frost: thaw P.M. 18. Rain. 19. Snow: rain P.M. 20. Frost: clear. 21. Frost: thaw P.M. 22. Thaw: fog. 23. Rain. 24. Rain early A.M. 25. Frost early A.M.: rain. 26. Rain: flood. 27. Snow: slight frost. 28, 29. Frost, severe: snow lying. 30. Frost, severe: snow. 31. Very hard frost.